 COBOURG	THE CORPORATION OF THE TOWN OF COBOURG	
	STAFF REPORT	
TO:	Mayor, Deputy Mayor and Members of Council	
FROM: TITLE:	Rory Quigley, Municipal Arborist	
DATE OF MEETING:	October 26 2020	
TITLE / SUBJECT:	Urban Forest Management Plan: Annual Review and Assessment of Implementation Update	
REPORT DATE:	October 13, 2020	File #: N/A

1.0 STRATEGIC PLAN

Pillars/Objectives 2: Places; The Town protects, preserves and promotes its natural assets, heritage, arts, culture and tourism.

Strategic Actions: Create a climate change action plan

Desired Outcomes: Cobourg's natural environment will be safeguarded and protected

2.0 PUBLIC ENGAGEMENT

The Town of Cobourg's Council endorsed the Urban Forest Management Plan (UFMP) in August 2018 to be considered a plan for managing the community's urban forest. During the process of developing the UFMP, the plan's content underwent an extensive public and stakeholder consultation and engagement prior to its approval.

The first stage of this process sought input from the community and urban forest stakeholders to inform creation of the long-term direction and specific activities required for managing the urban forest (April 2017). The second stage (October 2017) invited the public, stakeholders and staff to help refine the proposed directions and activities of the draft management plan. Public meetings, discussion groups and online surveys were used to engage as wide a collective

as possible. The final draft was sent out for review and input before presentation to council and endorsement on August 13 2018.

3.0 RECOMMENDATION

As part of the UFMP implementation and objectives, the Town committed to compile a summary of tree maintenance activities and baseline urban forest existing conditions for annual reporting to Council.

It is Recommended:

THAT Council receive the report for information purposes.

4.0 ORIGIN

Section 9.0 of the Town of Cobourg's UFMP specifies preparation of an Annual Report on the state of urban forest health and progress in management of the Town's forest towards meeting the goals and objectives set out in the document. This section of the UFMP recommends that the annual report to Council include a summary of the implementation status for the action items prioritized by the Plan, so as to provide for a periodic assessment of progress and success.

5.0 BACKGROUND

This UFMP represents a collaborative effort of the Town of Cobourg, its stakeholders, and community to build a positive forest strategy. This plan guides Town staff in the management of the urban forest over the next twenty years to meet its stated vision, principles, goals and objectives.

The Vision Statement which helps guide future decisions as they relate to natural resources in the day-to-day and long-term health of the urban forest is:

"Cobourg will be a community in the forest."

Based on the consultation with stakeholders, staff and the public, five goals were established to achieve the vision:

1. The urban forest will be lush, diverse, healthy & resilient
2. The urban forest will contribute to community sustainability
3. The Town of Cobourg community will understand the urban forest's importance and will be actively involved in its care
4. The Town's approach to management of trees on public lands will meet urban forest & community needs

5. The Town will support residents and businesses in the stewardship of trees on private property

The Vision Statement and Goals set out in the UFMP provide for an effective and manageable framework for addressing Cobourg's urban forestry needs.

6.0 ANALYSIS

Through the UFMP document, we begin to understand that trees are a critical asset which is an integral part of Cobourg's urban infrastructure and we can agree that the urban forest contributes directly to the health and quality of life of its citizens. These qualities make Cobourg's urban forest an important asset to the framework of our neighbourhoods as well as of our entire community.

To begin, we need to recognize two critical questions in this comprehensive plan: what do we have, and how much canopy cover is there? To direct resources in a mindful and efficient way, we need a strong understanding of what we are managing.

Tree Asset Data

Asset data improvement was one of the first objectives for our focus as good data would provide a strong base for how we would effectively accomplish the majority of the UFMP tasks and objectives moving forward. This was a large undertaking and we are happy to report that 93.7% of all trees in the Town's inventory now have current data, collected within the last 3 years. This inventory update was originally estimated to be contracted out at \$40,000. With hiring of skilled students along with in-house training, this task was accomplished within the last year's operating budget. For ongoing management of this information, the tree data will be updated on a sectional basis to keep all trees current within a 3 year window.

Canopy Cover

The second focus area of understanding has been how much of the Town area is covered by trees. Using the iTree program in 2018, it was determined that Cobourg's canopy was: 27.2% (+/- 1.41); in 2020, using the same program, an increase in the canopy was assessed at: 29.4% (+/- 1.44). This potential increase is a positive number, but caution is advised as we are still within the plus/minus window for the dataset; the increase should be looked at as essentially even, and not representative of a substantial gain.

To provide further context, these tree canopy estimates were obtained through the i-Tree program which uses available Google imagery. The quality of this photography is not as accurate as desired for assessing canopy due to the averaging built into the process and because most of the available imagery is leaf-off.

In assessment of this limitation, it has been determined that if the Town were to acquire our own set of large-scale leaf-on photos, we could use this imagery to gather information about our vegetation and, particularly, compile a more detailed understanding of our tree cover that would complement and potentially replace some aspects of our current field inspections. For instance, this imagery would allow for canopy measurement that in turn can be used to analyze how the Town's trees are helping to offset the community's carbon footprint. This tool would also contribute to Asset Management by providing a critical component to better understanding of urban forest benefits in comparison to the cost of management.

The benefit of having this imagery will be realized across all Town departments, including the Parks department. Much of the results of Parks' work can be viewed better during the leaf-on season in terms of sports field markings, gardens, and other plantings. Overall, all staff and councillors will benefit from further developing our library of air photos as reference material, to assist in monitoring of neighbourhood changes over time and to serve as an illustrative base for Town cartography. Although there are financial implications, benefits would accrue across the corporation.

The Ganaraska Region Conservation Authority (GRCA) is currently working with its other member municipalities to extract more accurate and up-to-date canopy calculation from the aerial imagery described above. The GRCA could potentially complete data modeling for the Town to develop a more up-to-date and accurate canopy % cover. This updated baseline data, along with annual or bi-annual leaf-on canopy cover measurement, will provide a truer benchmark, than the current i-Tree estimate, against which to measure the Town's future progress.

Tree Maintenance

One way to describe trees is as a living, natural, self-engaging structure that is continually reacting to external forces to survive, mature and reproduce. For effective management, we must understand this unique process of how trees grow; how they react to external pressures to compete for sun light and nutrients; and how trees engage decay, insects, weather, infrastructure, and people. In maintaining an urban forest, there will always be some level of risk, regardless of the range of mitigation measures that can be employed within the urban setting because there will always be a potential target (i.e. a house, car, fence, etc.) when a tree failure, such as a downed limb or tree, occurs. To proactively manage this inherent urban forest risk, a staged reporting system has to be developed that compiles specific data from the inventory to identify the highest risk trees. These trees would then be placed into the yearly inspection cycle. Using this system, we can focus upon trees and/or areas of concern in a logical and cost effective approach.

Tree Planting

Currently we are meeting the tree planting targets outlined in the UFMP. With the removal of trees over time, along with specific invasive attacks such as Emerald Ash borer (EAB), Beech Bark Disease (BBD) or infrastructure and development conflicts, it has become more critical to develop a Tree Planting Strategy. There has also been recent public input to suggest that we need to expand beyond these tree planting numbers in order to achieve our canopy cover targets as well as meet all replacement, infill, and development plantings. To meet all these objectives, we must start with a solid document that describes a disciplined and organized approach, which looks at private planting incentives, address public tree planting requirements and that maximizes budget. A Town and Neighbourhood Tree Planting Strategy is our next high priority short-term task item.

Development

With over 73% of the total property fabric in Cobourg comprised of privately owned lands, tree planting on private lands is critical to both maintaining and increasing the Town's canopy cover to 35%. The Forestry Section's continued participation as part of the Development Review Team (DRT) has created opportunities for protection of existing trees and establishment of new trees as part of infill and development projects. Important tree-related short-term objectives for development review include: to create and enhance current policies and guidelines that address net zero canopy loss, achieve tree and environmental land protection, and enhance future and existing landscapes by establishing more diverse and canopy positive neighbourhoods.

A more detailed description of actions and tasks identified in the UFMP can be found in Appendix A.

7.0 FINANCIAL IMPLICATIONS/BUDGET IMPACT

At this time there are no financial implications associated with this staff report.

As part of meeting the goals and objectives of the UFMP, there will be a 2021 budget recommendation for support staff, as outlined in the Tree Maintenance Program 2.3 and Community Stewardship 4.1 tasks (see Appendix A).

Consideration will also be requested in the 2021 budget for purchase of more accurate tree canopy air photo data sets with leaf-on.

8.0 CONCLUSION

The Urban Forest Management Plan is a blue print by which Forestry Services sets its short-term goals and annual work plans. This report provides a recap of the 2019 accomplishments and outlines or future work plans. Challenges with the

state of Cobourg's tree canopy health will continue to include Emerald Ash Borer through ash tree management and removal, as well as the current work load of staff to keep pace with development and bylaw items. Staff also must fulfill ongoing Operational responsibilities, including but not limited to: public service requests, inspections and organization of contractors for tree maintenance, and tree planting.

Title:	Signing Official:	Signature:	Date:
Arborist	R. Quigley	<i>Rory Quigley</i>	October 15, 2020
Director of Recreation & Culture	D. Hustwick	<i>Teresa Behan</i>	October 15, 2020
Chief Administrative Officer	T. Vaughan	<i>T. Vaughan</i>	<i>October 16/2020</i>

Appendix A (UFMP Update Report February 2020)

To achieve the vision, principles, goals and objectives set out in the UFMP, 9 core programs were established that represent all aspects of achieving a healthy urban forest canopy within our community.

1. Tree Planting Plan
2. Tree Maintenance Program
3. Risk Management Program
4. Community Stewardship Program
5. Resourcing Strategy
6. Regulatory Initiatives
7. Heritage Tree Program
8. Governance
9. Integration with Other Related Initiatives

Section 7 of the plan describes these programs. To help achieve the goals of the plan over the next 20 years, four 5-year work plans were established (with the first 5-year period being the most detailed) for completing the tasks outlined in each of the 9 programs. The overall work plan is separated into 3 main timelines:

- Ongoing Goals /Tasks
- Short Term Goals / Tasks – looked at over 1 to 2 years (ending Dec 31 2020)
- Medium to Long Term – from 3 to 20 years

This report summarizes only the status of the Ongoing Goals / Tasks (OG) and Short Term Goals / Tasks (STG). As no Medium to Long Term tasks fell within the reporting period of this report, and therefore have not yet needed to be addressed, they are not included in this summary.

A tracking status key is listed here to describe the progress on each task within the nine core programs. Each action is assigned a status comment of: Implemented or Pending.

#1 Tree Planting Tasks / Goals			
Status	Task #	Action	Status/Comments
STG	1.1	Develop Town and Neighbourhood Tree Planting Strategy , including an approach to tree replacement, to increase canopy cover to 35% and to increase connectivity for people and for the natural heritage system.	Pending: To be completed. (is currently being drafted; the goal is to have a final draft in Dec 2020)
OG	1.2	1.2 Coordinate annual tree planting, according to the strategy (task 1.1 below), on public and private lands to replace removed trees (~50 per year for reasons of age, death, disease, pests or safety) and to increase canopy cover by ~1% per year to reach 35% forest canopy target (minimum 150 trees/year = 50 replacement trees + 100 trees for planting, with half the trees (~100) planted each on public and private lands)	Implemented: Alternative approach. <i>*More information provided in appendix B (3)</i>
OG	1.3	Compile report on annual tree planting as part of overall annual reporting on urban forest management activities	Pending: To be completed. This report is being prepared. The goal is to have a draft completed for Jan 2021 <i>*More information provided in appendix B (3)</i>
STG	1.4	Develop a tree species list with guidance on recommended site characteristics per species to guide planting on public and private lands.	Implemented:
STG	1.5	Develop and provide a tree planting guide for use by Town staff, contractors, residents & landowners.	Implemented: In use in Town contracts and forwarded when requested

OG	1.6	Update Town Neighbourhood Tree Planting Strategy annually. (also part of STG 1.1)	Pending: The annual strategy is being prepared as part of Task 1.1 above, with implementation through the winter 20/21 season
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#2 Tree Maintenance Program

OG	2.1	Develop the <u>Tree Maintenance Program</u> and integrate annually into the work order system	Implemented: using existing maintenance system within 'Cityworks'.
STG	2.2	Complete the Town's tree inventory, updating and completing information for the approximate 6500 trees in the existing inventory, and adding street, park and laneway trees not yet fully captured in the database. Data is uploaded directly to the CityWorks database through use of a Data Collector Application used on a tablet or phone by field staff	Implemented: Inventory currently has (+/-) 7765 active trees total (2019) (+/-) 8100 active trees total (as the date of this report) <i>*More information provided in appendix B (4)</i>
STG	2.3	Hire a Forest Technician / Arborist to support the Town Arborist in delivery of this urban forest management program	Pending:
OG	2.4	Update the inventory on an annual basis to reflect activities completed under the Tree Planting and Maintenance Programs	Implemented: The inventory system is currently at the most accurate status it has ever been. <i>*More information provided in appendix B (4)</i>
STG	2.5	Conduct catch-up on tree maintenance (pruning of all trees, as needed, treatment for pests, disease and invasive species) identified through the 2018 tree inventory update	Implemented:

OG	2.6	Conduct annual tree inspections, identifying trees requiring inspection from data in the tree inventory by applying the criteria in the risk management matrix (Table 6.1)	<p>Implemented: Using the updated data (task 2.4), and with the help of GIS Department, have built out inspection models based on that data called <u>Town of Cobourg: Urban Forestry Report (s)</u></p> <p><i>*More information provided in appendix B (5)</i></p>
OG	2.7	Complete annual tree maintenance – formative pruning, management for pests, diseases and invasive species and removal of high risk trees - as identified through the tree inventory data and risk management assessment	<p>Implemented:</p> <p><i>*More information provided in appendix B (6)</i></p>
OG	2.8	Report on Baseline urban forest existing conditions (base provided in this UFMP) for annual reporting on progress	<p>Implemented:</p> <p><i>*More information provided in appendix B (7)</i></p>

#3. Risk Management Program

STG	3.1	Inspect all public trees according to the risk management matrix in table 7.3, at the same time as update of the tree inventory data described in Task 2.2 & 3.4	<p>Implemented: Using the updated data (task 2.4,) and with the help of GIS Department, have built out inspection models based on that data. (Also part of 2.6 & 3.3)</p> <p><i>*More information provided in appendix B (5)</i></p>
STG	3.2	Address all high risk trees requiring attention, as identified through the updated tree inventory	<p>Implemented:</p>
OG	3.3	Complete annual tree inspection program according to the direction provided in the Risk Management Matrix	<p>Implemented: Using the updated data, and with the help of GIS Department, have built out</p>

			inspection models based on that data. (Also part of Tasks 2.6 & 3.1) <i>*More information provided in appendix B (5)</i>
OG	3.4	Prioritize completion of preventative maintenance identified through the inspection program, pruning trees to manage/prevent development of unstable tree limbs and removing high risk trees	Implemented: Using the updated data, and with the help of GIS Department, have built out inspection models based on that data. (Also part of Tasks 2.6 & 3.3) <i>*More information provided in appendix B (5)</i>

#4 Community Stewardship Program

STG	4.1	Hire a Community Stewardship Coordinator, initially on contract, to support Town Arborist and to initiate Community Stewardship Program; demonstrate progress, then consider establishment of a permanent position	Pending:
STG	4.2	Develop the Community Stewardship Program (base program provided in this UFMP)	Pending:
OG	4.3	Implement the program, including web information, development of public education materials, Town support to encourage community participation in tree, care and planting, tree tag identification, celebration of trees	Pending: Currently working on updating web site.
OG	4.5	Continue and expand the Town's Memorial tree program	Pending: This program will be captured in the <u>Town Neighbourhood Tree Planting Strategy</u> .

STG	4.7	Work with site master planning teams, such as for the Tannery Site, Waterfront and others, to integrate sustainable urban forest concepts as a demonstration for the community	Implemented:
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#5 Funding and Resourcing Strategy

STG	5.1	Develop a Resourcing Strategy to ensure the staff, capital and operating resources are in place to implement the UFMP	Pending:
OG	5.2	Pursue local funding opportunities, i.e. corporate sponsorships, a bequest program, other fund-raising	Pending:
OG	5.3	Seek all available agency and grant opportunities for tree planting and maintenance	Pending:
STG	5.4	Implement recommended by-law updates to increase funding for tree establishment and maintenance	Pending: Next update may include a fee for permit

#6 Regulatory Initiatives

STG	6.1	Integrate recommended Tree By-Law updates into the upcoming by-law review	Pending: High priority to be completed for 2020
OG	6.2	Monitor and report on results of the Tree Protection By-Law	Pending:
STG	6.3	Periodic update of by-law to integrate recovery of required maintenance costs, increased compensation for removed trees and other controls identified for protection of trees	Pending: Next update may include a fee for permit

#7. Heritage Tree Program

OG	7.3	Recognize and promote identified heritage trees through initiatives such as the Town website, walking & cycling tours, tourism materials	Pending: Currently working on website updating.
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8 Governance

OG	8.1	Continue coordination of tree protection on proposed development lands through Development Review Team	Implemented: part of the Development Review Team (DRT).
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STG	8.2	Engage the County CAO's shared services initiative to implement urban forest projects (i.e. tree planting, pest management, ecological restoration & connectivity) and add advice on urban forest management to the mandate of the Planning & Sustainability and Environmental & Active Transportation Advisory Committees	<i>Implemented:</i> We have also started a working group with GRCA/County and Neighboring Municipalities with a focus on tree and forestry <u>'Natural Heritage and Trees GRCA and Municipal Partnership Meeting'</u>
	/8.3	Consider set-up of an urban forest working group to coordinate initiatives across Town departments and with partners such as the County, GRCA, utility companies; Work through existing Public Works-Utility Companies committee meetings to coordinate projects for the urban forest	

#9 Integration with Other Town, County & Neighbouring Community Initiatives

STG	9.1	Include directions within the Town's Asset Management Strategy for adequate consideration of tree needs in overall management of Town infrastructure assets	<i>Pending:</i>
STG	9.4	Integrate urban forest management directions with those of the Town <i>Parks Master Plan</i> , providing direction for park naturalization for Lucas Point Park, James Cockburn Conservation Area, Sinclair Park,	<i>Pending:</i>
OG	9.5	Update the Tree Preservation By-Law, monitor progress on by-law implementation and track needs for future additional regulatory controls for tree preservation.	<i>Pending:</i> Next update may include a fee for permit

OG	9.6	Continue to implement Cobourg's Urban and Landscape Design Guidelines as part of tree planting and maintenance	<i>Implemented:</i>
OG	9.8	Fulfill Town responsibilities under the <i>Invasive Species Act</i> , including: management of invasive species located on public lands as part of the Town Risk Management Program and public education, guidance and best management practices for controlling invasive woodland species	<i>Pending:</i>

Appendix B **(UFMP Update Report February 2020)**

As part of the overall health assessment of Cobourg's urban forest, data and comparisons were compiled to provide further context to the accomplished goals, objectives, and tasks listed in the Analysis section of the report.

1. Town / Private Land Comparison

The average generally cited in studies suggest a relative municipal / private land split to be 40% Public to 60% Private for Canadian urban forests. With the help of the GIS department, data was extracted to give us a relatively accurate estimation of this percentage for the Town:

		<i>square meters</i>	<i>%</i>	
Total area within Town limit north of shoreline (includes the harbour):		23,199,894.18		
Total area that is privately owned: (Lakefront properties are included in private)	16,936,166.63	<u>16,936,166.63</u>	73.00%	Private
		6,263,727.55		
Total area/Land that is Town owned:	2,771,645.85			
So ROW's equal approximately (includes county road ROW).	<u>2,486,904.52</u>			
	5,258,550.37	<u>5,258,550.37</u>	22.67%	Public
leftover: 401 & south west polygon		1,005,177.18	4.33%	<i>(other)</i>
			<u>100.00%</u>	Total

The Public proportion of the Town's land area will increase over time with the inclusion of infrastructure within new developments, such as East Village and the Rondeau Lands.

Given this information, it is evident that the accomplishment of our canopy cover target of 35% will require a comprehensive strategy that encourages planting of new trees and preservation of established mature trees on privately owned lands.

2. Cobourg's Urban Forest Canopy Cover (UFMP 3.2)

Cobourg's tree canopy cover was assessed at the time of the report using the i-Tree software application. The information provided a simple baseline for the Town's estimated tree canopy cover. This information was recently repeated, using one thousand randomly generated points within the Town's boundaries.

March 2018: Total Forest i-Tree Canopy: 27.2% (+/- 1.41)

Jan 2020: Total Forest i-Tree Canopy: 29.4% (+/- 1.44)

Please note that there are some limitations to this data: leaf-off imagery can be difficult to interpret and i-Tree Canopy interpretation is limited by the quality of the Google imagery which is largely leaf-off.

As outlined in the UFMP, in addition to supporting the calculation of Cobourg's canopy cover, the i-Tree application also calculates the estimated value of Cobourg's trees in removing air pollutants. The following table presents the annual amount (in tonnes) of air pollutants removed each year by trees, as well as the total amount of carbon dioxide stored within the trees, and their respective dollar values to the community. The following is a comparison of the 2018 and 2020 calculations.

Tree Benefit Estimates for the Town of Cobourg's Urban Forest*

<u>Removed Annually</u>		2018		2020	
		<u>Tonnes</u>	<u>Canadian\$</u>	<u>Tonnes</u>	<u>Canadian\$</u>
Carbon Monoxide	CO	0.135	\$71.68	0.15	\$85.43
Nitrogen Dioxide	NO2	3.69	\$123.39	4.15	\$147.08
Ozone	O3	36.73	\$6,426.08	41.35	\$7,659.70
Particulate Matter - fine	PM2.5	1.78	\$13,283.89	2.01	\$15,834.00
Particulate Matter - coarse	PM10	12.3	\$4,665.18	13.85	\$5,560.74
Sulphur Dioxide	SO2	2.32	\$21.56	2.62	\$25.71
Carbon Dioxide Sequestered Annually	CO2	7478.53	\$329,572.98	8452.01	\$518,478.50
Total Value of "Pollutants" Removal			\$354,164.74		\$547,791.16
Carbon Dioxide Stored in Trees	CO2	188557	\$8,309,561.43	212261.7	\$13,020,940.46

* As estimated from i-Tree Canopy Cover and Tree Benefits Assessment

3. Tree Planting 2019 by the numbers (Task 1.2):

The 2019 tree planting Total: 196

- Infill: 15
- Replacement: 85
- Donation Trees: 11
- Development: 85

Please note that the 2019 planting totals cannot be directly compared to the number of 2019 trees removed. This comparison can be misleading as often replacement trees will not be planted until several months after removal.

We are currently working on a more comprehensive paper that updates the annual tree planting data and strategy. The goal will be to populate current and existing tree data in order to better assess health and growth of past year classes, and to show: species selection and diversity numbers, Levy related planting, and survival rates. Private Development numbers will also be assessed in relation to site plan development.

4. Data Inventory (Task 2.2)

Updating the Town's Tree Data has been one of the largest accomplishments to date. It is critical to have current and accurate information if we are to fully understand and cost-effectively manage the urban forest. This tree status information is used to prepare a detailed work plan for proactive maintenance, planting and risk management activities on an annual basis.

Current Active trees in the system: 7765 (December 31 2019)

Of that

- 2949 of them are Parks trees (38%)
- 4816 tree assets are road or open space trees. (62%)

As this action represents a critical element for the operation of other forest management tasks, the database must be accurate and up-to-date. A total of 93.7 % of the tree data within our database was updated within the last 3 years.

- 2017-2019: 7282 trees – 93.7%
- 2014-2016: 194 trees – 2.4%
- 2013 and before: 6 trees -
- Not inventoried or No Date: 277 trees– 3.5%

To manage the existing tree database and to collect information in an organized and logical way, all tree points will be divided in to 4 sections, with one of those sections collected each year. Updating of tree data will continue to be collected as part of the inspection process.

5. Inspections (Task 2.6, 3.1, 3.3 & 3.4)

To manage risk, it is important for the Town and community to understand that if we want trees and wish to enjoy all the benefits of a healthy urban forest, we must assume some risk. The only way to remove any inherent risk would be to remove all trees. Trees are living, active, self-engineering structures that react to maniacal damage, decay and weather.

With over 7765 trees in the public inventory, we cannot annually inspect every tree. We rely on the public to raise concerns to us in some cases. Our main management approach is to be proactive by analyzing our existing data to identify trees that have the potential to pose an increased risk to property and people. Our response is then to generate an inspection for the identified higher risk trees. Data assessed include: DBH, Lifecycle, Health, "Not Ash" trees, and whether trees have been inspected in the recent past. The results of this analysis are used to generate 4 lists of trees with increased inspection frequencies and to set a prioritized maintenance program based upon the inspection findings.

Tree inspection completed in 2019 - Total 1005

Ash Tree Inspection – 376 (37.4%)
By-Law Tree Inspection – 54 (5.4%)
Damaged Tree Inspection – 55 (5.5%)
Donation Tree Inspection – 146 (14.5%)
Level 0 Tree Inspection – 230 (23%)
Level 1 Tree Inspection – 39 (3/8%)
Beech Tree Inspection – 105 (10.5%)

(Comparison: in 2018 we completed a total of 690 inspections)

6. Tree Maintenance (Task 2.7)

Summary of Service Requests directed to the Forestry section in 2019

2019 Service Requests Summary		
SR Description	# of Request	% of Requests
Business Consultation	15	3.18%
Business Consultation (Forestry)	27	5.73%

General Forestry Inquiry	151	32.06%
Homeowner Consultation	21	4.46%
Homeowner Consultation (Forestry)	79	16.77%
Request for a new tree	86	18.26%
Request for maintenance on a tree	88	18.68%
Trees in Parks	1	0.21%
Website Tree Issue	3	0.64%
Total	471	

2019 Status Check	# of Request	% of Requests
CLOSED	313	66.45%
COMPLETED	154	32.70%
Not Started	2	0.42%
Unknown/Not Specified	2	0.42%
Total	471	

Summary of Work Orders from City works Data (as of Feb 3 2020)			
Work Order Description	# of WO completed/closed	Total # Assist worked on	Type of work completed
Stump Grinding	36	92	Grinding stump, debris removed soil and seed added.
Tree Maintenance	76	424	General Tree Pruning, dead wood, and clearances.
Tree Removal	89	271	Removal of tree, including brush and wood
Fertilization / Watering	33	154	Deep root fertilization and watering of trees
Mulching	9	303	Upkeep and refresh mulch around trees

Summary Notes

- **Stumping:** of the 92 total stumps ground, 35 were ash (*Fraxinus spp.*)
- **Tree Maintenance:** 37 of the 76 work orders completed were to fulfill a Service Request.
- **Removals:** from the total of removals for 2019, 176 were ash (*Fraxinus spp.*) and 13 were related to weather events. Of the total Work Orders, 35 were to respond to a Service Request from the public.
- **Fertilization / Watering:** 2019 was a fair year for regular rain events so provision of supplemental water due to drought conditions was not needed.
- **Mulching:** 2019 was a good year for mulching with over 500 trees in parks and right of ways completed

7. Urban Forest Characteristics

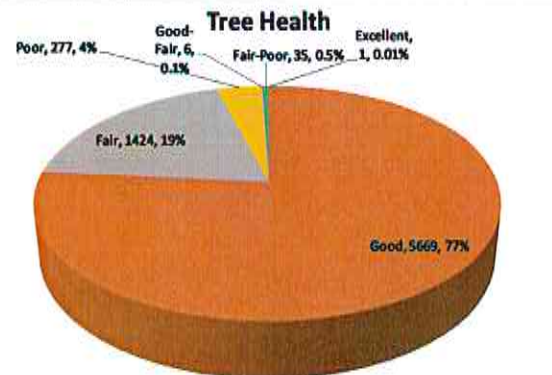
The following figures represent a comparison of the Town of Cobourg's urban forest health and diversity, obtained from analysis of the 2016 and 2019 tree inventory data. Highlights of this data comparison include the following:

- There is a greater proportion of Town trees in Good health in the current, updated database in comparison to the information known in 2016;
- The relative distribution of DBH classes in 2019 remains generally similar to those observed with the 2016 data; and
- Observed differences in the profiles for tree species and classes for height and canopy width are due to the more comprehensive 2019 dataset, compared to 2016. The 2019 figures reflect more accurate information than available in 2016.

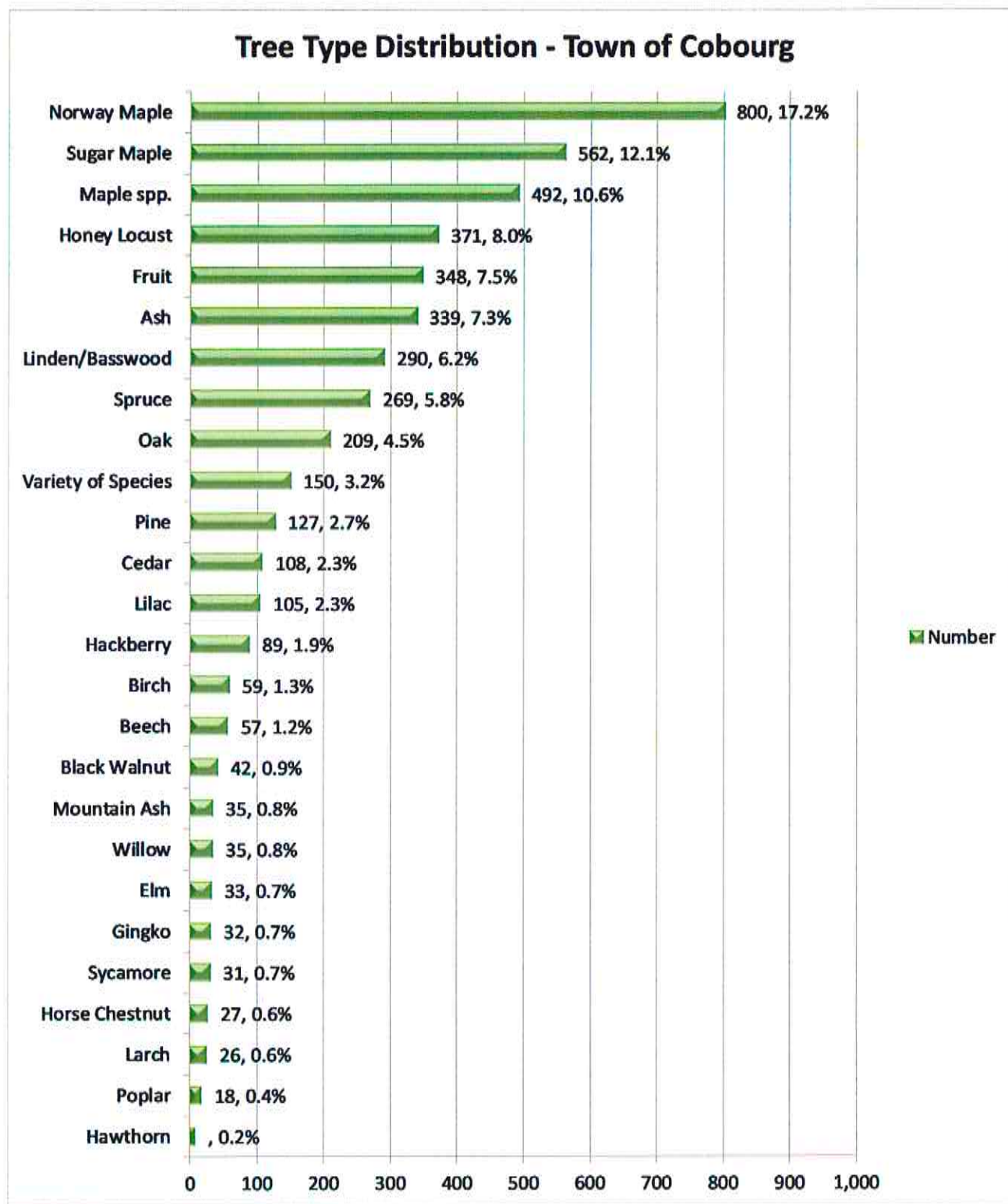
2016 Tree Health



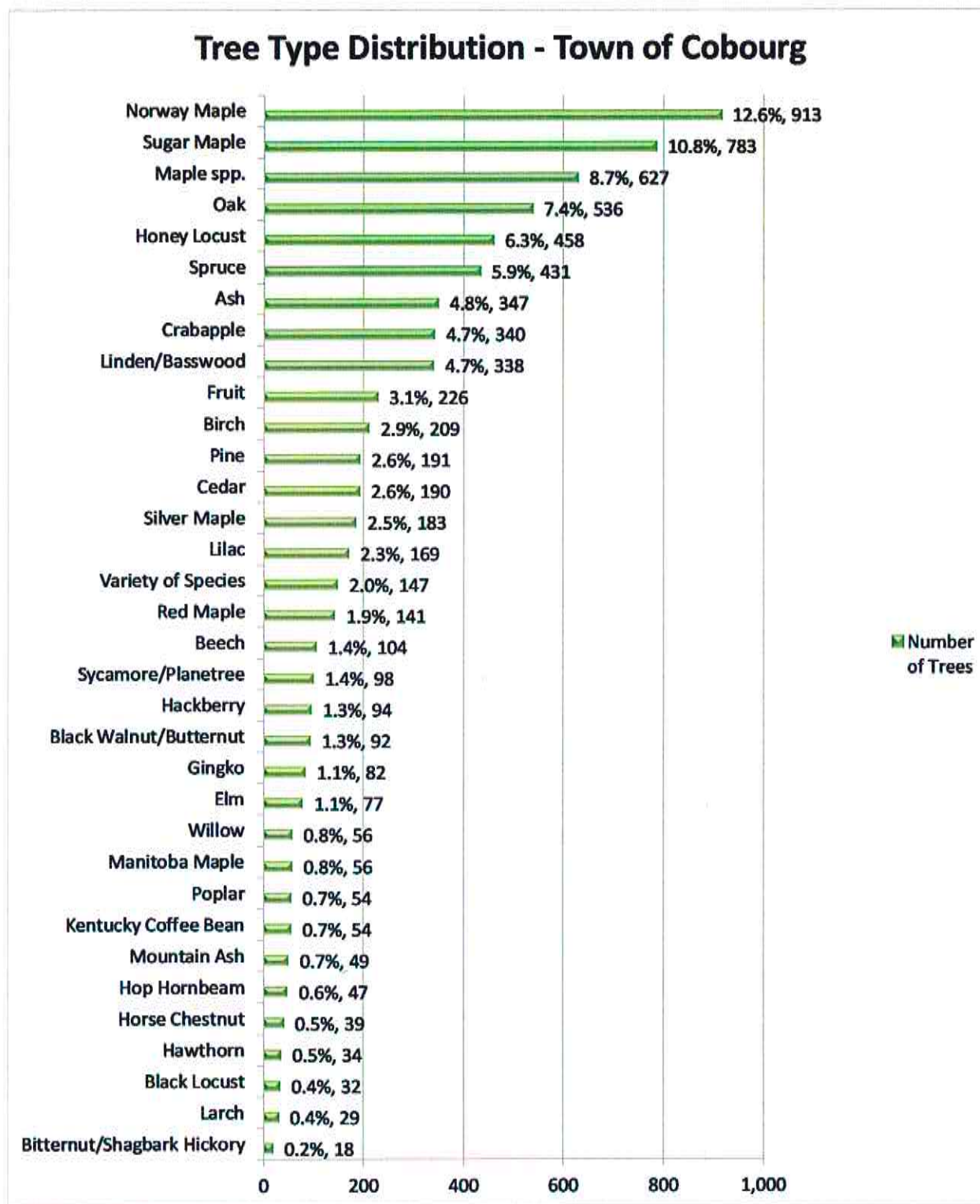
2019 Tree Health



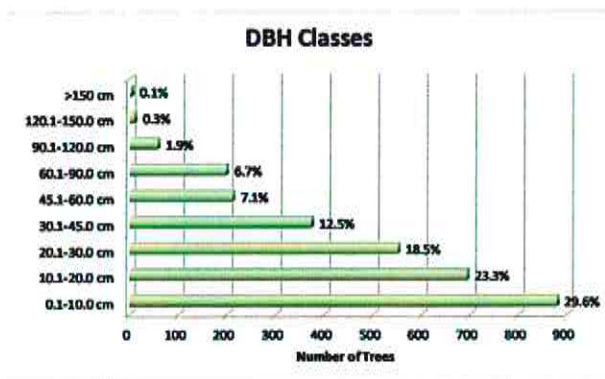
Tree Species Profile - 2016



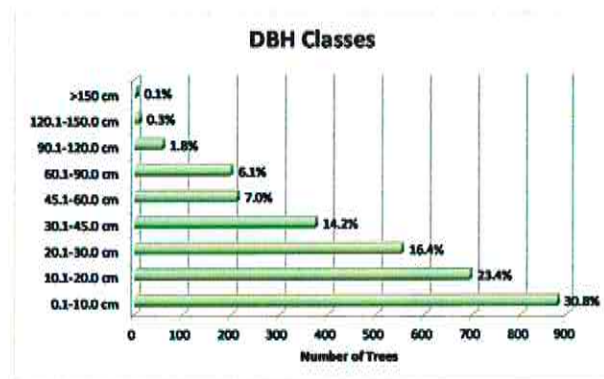
Tree Species Profile - 2019



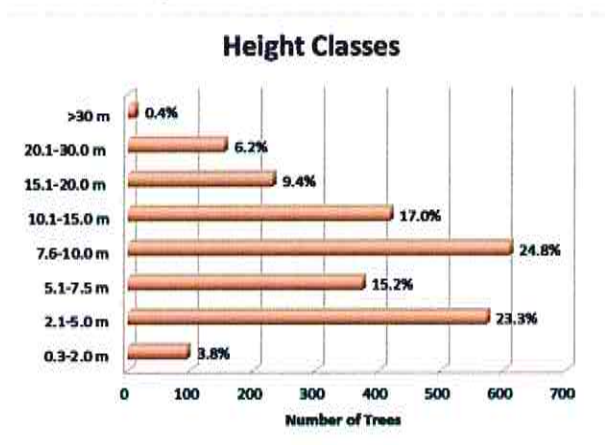
2016 DBH Classes



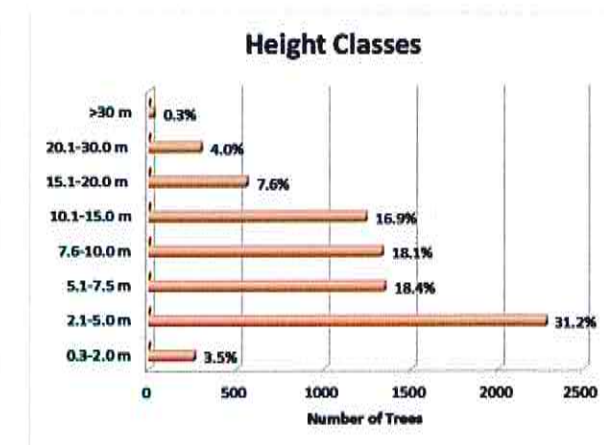
2019 DBH Classes



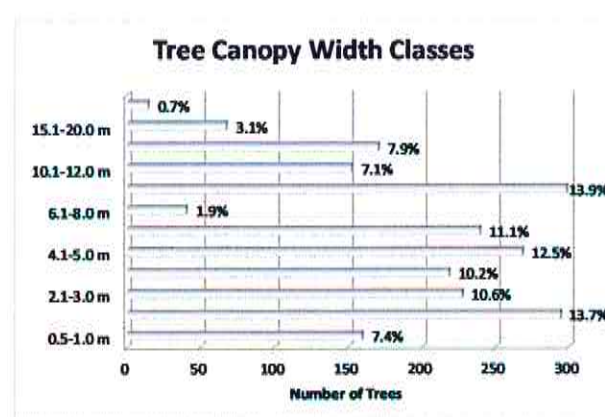
2016 Height Classes



2019 Height Classes



2016 Canopy Width Classes



2019 Canopy Width Classes

